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EXAMINER	
PARK, CHAN S	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/823,782	HARPER, MARK A.	
	Examiner	Art Unit	
	CHAN S PARK	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. An initialed and dated copy of Applicant's IDS form 1449, Paper No. 2, is attached to the instant Office action.

Specification

2. The disclosure is objected to because of the following informalities: Application Number is required in pg. 4, line 18.

Appropriate correction is required.

Claim Objections

The following quotations of 37 § CFR 1.75(d)(1) is the basis of objection:

> (d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims my be ascertainable by reference to the description. (See § 1.58(a)).

3. Claim 7 recites the limitation "said printer driver" in line 6. There is insufficient antecedent basis for this limitation in the claim.

4. Claims 13, 14, 18, 21 and 22 are objected to because of the following informalities: a word "communicatably" appears to be grammatically improper. Appropriate correction is required.

5. Claim 29 is objected to because of the following informalities: perhaps "a computer" should be "said computer." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 13-19, 21-25, 27-34 and 36-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Owa et al. U.S. Patent No. 6,348,971 (hereinafter Owa).

6. With respect to claim 1, Owa discloses an apparatus (host computer 1 in fig. 2) for estimating printer resources, said apparatus comprising:

a comparator (output destination printer selection section 11) configured and adapted to receive first and second values, said comparator further being adapted to compare (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39) said first value to said second value and to generate an output signal based on said comparison, wherein said first value represents a quantity of a printer resource needed to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and further wherein said second value represents an amount of said printer resource available at a printer (fig. 4); and

a controller coupled to said comparator, said controller being configured and adapted to control said comparator and to generate a control signal based on said comparison (col. 5, lines 8-9).

Since the apparatus is in a computer-based environment, the controller, which is interpreted as a CPU, is an inherent feature. It is apparent to one of ordinary skill in the art that the CPU communicates with and controls various components in the apparatus.

7. With respect to claim 2, Owa discloses the apparatus of claim 1 further comprising: a converter coupled to said comparator and being coupled to and controlled by said controller, said converter being configured to receive said first and said second values, and said converter further being configured to convert said first and said second values into a common unit (page) of measure (col. 7, lines 31-39). It is apparent that the first and second values are converted so that *number of pages* present in the printer can be compared with the *number of pages* needed to print the print job.

8. With respect to claim 3, Owa discloses the apparatus of claim 1, wherein said control signal generated by said controller causes an indication signal to be generated and wherein said indication signal indicates that insufficient resources are available to print said document (warning signal in col. 5, lines 8-9).

9. With respect to claim 4, Owa discloses the apparatus of claim 3 further comprising an indication signal generator, said indication signal generator being configured to receive said control signal from said controller and further being configured to generate said indication signal in response to said control signal (warning signal in col. 5, lines 8-9). Since the warning signal is generated as a result of the comparison, the warning signal generator must be present to receive the comparison result and generate the signal based on the received comparison result.

10. With respect to claim 5, Owa discloses the apparatus of claim 1 wherein said control signal generated by said controller causes said document to be printed (col. 7, lines 12-22).

11. With respect to claim 6, Owa discloses the apparatus of claim 5 wherein said control signal generated by said controller is supplied by said controller to a print driver that responds to said control signal by sending a print command to said printer (col. 3, lines 32-35 & col. 7, lines 12-22).

12. With respect to claim 7, Owa discloses the apparatus of claim 1 wherein said control signal comprises a first control signal, and wherein said controller is further configured and adapted to generate a second control signal for causing a printer to switch between a first mode of operation and a second mode of operation, said printer responding to a printer server while operating in said first mode (fig. 1 & col. 17, lines 35-57) and said printer responding to a printer driver while operating in said second mode (col. 3, lines 23-40). According to fig. 1, the network printer of Owa has a capability of responding to the signals sent from either the print driver of the host (second mode) or the server (first mode in col. 17, lines 47-48). Thus, the printer must switch its responding mode depending where the signals are sent. Without the switching, the printer would not response to one particular mode at all.

13. With respect to claim 8, Owa discloses the apparatus of claim 1 wherein said apparatus is disposed in a computer (col. 3, lines 32-35).

14. With respect to claim 9, Owa discloses the apparatus of claim 1 wherein said apparatus is coupled to a computer (col. 3, lines 16-22).

15. With respect to claim 10, Owa discloses the apparatus of claim 1 wherein said printer resource comprises paper (col. 7, lines 35-39).

16. With respect to claim 13, Owa discloses a computer system comprising:

a processor (fig. 2);

an apparatus coupled to said processor, said computer system being configured to receive first and second values and compare said first value to said second value and being further configured to generate a control signal based on said comparison (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39), said first value being associated with an amount of a first printer resource that is required to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and said second value being associated with an amount of said first print resource that is available at a printer (fig. 4); and

a print driver coupled to said processor and to said apparatus, said print driver being capable of receiving and responding to said control signal (col. 3, lines 32-34).

17. With respect to claim 14, Owa discloses the computer system of claim 13 wherein said print driver is coupled to said printer and wherein said print driver responds to said control signal by causing said printer to print said document (col. 7, lines 12-22).

18. With respect to claim 15, Owa discloses the computer system of claim 14 wherein said print driver comprises a missile extension (network communication section 49 in fig. 8) and wherein said missile extension communicates with a ping firmware (communication control section 67 in fig. 8) disposed in said printer (col. 4, lines 13-16). It is evidently clear that the printer and the print driver support the two-way

communication for the information exchange. Thus, Owa discloses the invention as specified in claim 15.

19. With respect to claim 16, Owa discloses the computer system of claim 13 wherein said print driver responds to said control signal by causing an indication signal to be generated and wherein said indication signal indicates that an insufficient amount of said first printer resource is available for printing said document (warning signal in col. 5, lines 8-9).

20. With respect to claim 17, Owa discloses the computer system of claim 16 further comprising a monitor, wherein said indication signal generated by said print driver comprises a text message to be displayed on said monitor (warning signal in col. 5, lines 8-9 & fig. 12b). The Office interprets that the warning signal is converted to text message and that text message is displayed on the screen because system uses the screen to notify the result of the comparison according to fig. 12b).

21. With respect to claim 18, Owa discloses the computer system of claim 17 wherein said print driver is coupled to said printer and wherein said apparatus is further adapted to cause said print driver to generate a command that causes said printer to switch from a first mode of operation (fig. 1 & col. 17, lines 35-57) to a second mode of operation (col. 3, lines 23-40) and further wherein said apparatus causes said print driver to generate said command in response to a print job assurance request (request on lines 47-48). It is evidently clear that the printer can both communicates with the host and the server depends on a request sent by the host computer (col. 17, lines 47-48).

22. With respect to claim 19, Owa discloses the computer system of claim 18 wherein said first mode of operation causes said printer to respond to commands issued by a print server (fig. 1 & col. 17, lines 35-57).

23. With respect to claim 21, Owa discloses the computer system 13 wherein said print driver is coupled to said printer, said apparatus further being configured to cause said print driver to request that said printer transmit said second value (col. 4, lines 13-16).

24. With respect to claim 22, Owa discloses the computer system 13 wherein said print driver is coupled to said printer and wherein said second value is supplied to said apparatus by said print driver (col. 3, lines 23-40).

25. With respect to claim 23, Owa discloses a computer network, said network comprising:

a communication network (fig. 1);

a plurality of computers coupled to said communication network (col. 3, lines 17-18);

a controller (server 3) coupled to said communication network, said controller being capable of receiving a plurality of print jobs from said computers (col. 17, lines 35-58);

a printer coupled to said communication network, said printer being configured to operate in a first mode wherein said printer is responsive to said controller (col. 17, lines 35-58) and in a second mode wherein said printer is responsive to one of said plurality

of computers (fig. 2) and wherein said printer switches between said first mode and said second mode in response to a printer control signal; and

a print job assurance apparatus couple to said communication network and further coupled to one of said commuters, said print job assurance apparatus being configured to cause said one of said computers to generate said printer control signal (col. 5, lines 8-9), said print job assurance apparatus further being configured to determine whether said printer has sufficient printer resources to print a document (col. 5, lines 1-25; col. 5, lines 41-44; col. 7, lines 35-39; and fig. 12b).

According to fig. 1, the network printer of Owa has a capability of responding to the signals sent from either the print driver of the host (second mode) or the server (first mode in col. 17, lines 47-48). Thus, the printer must switch its responding mode depending where the signals are sent. Without the switching, the printer would not response to one particular mode at all.

26. With respect to claim 24, Owa discloses the communication system of claim 23 wherein said print job assurance apparatus is further configured to provide an indication signal to said one of said computers, said indication signal indicating whether said printer has sufficient print resource to print said document (fig. 12b).

27. With respect to claim 25, Owa discloses the communication system of claim 23 wherein said one of said computer comprises a print driver (col. 3, lines 31-35).

28. With respect to claim 27, Owa discloses the communication system of claim 23 wherein said controller comprises a print server (col. 17, lines 35-58).

29. With respect to claim 28, Owa discloses a computer program product comprising a computer usable medium having computer readable program code embodied in said medium that when executed causes a computer to:

compare a first value to a second value, said first value being an amount of a printer resource required to print a document, and said second value being an amount of said printer resource available at a printer (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39); and

generate a control signal based on said comparison (col. 5, lines 8-9).

30. With respect to claim 29, Owa discloses the computer program product of claim 28, further comprising computer readable program code embodied in said medium that when executed causes said computer to:

convert said first and second value to a common unit of measure before said first and second values are compared.

It is apparent that the first and second values are converted so that *number of pages* present in the printer can be compared with the *number of pages* needed to print the print job.

31. With respect to claim 30, Owa discloses the computer program product of claim 28, further comprising computer readable program code embodied in said medium that when executed causes said computer to:

supply said control signal to a print driver, said control signal causing said print driver to generate a message indicating whether said printer resource available at said printer is sufficient to print said document (warning signal in col. 5, lines 8-9 & fig. 12b).

The Office interprets that the warning signal is converted to text message and that text message is displayed on the screen because system uses the screen to notify the result of the comparison.

32. With respect to claim 31, Owa discloses the computer program product of claim 28, further comprising computer readable program code embodied in said medium that when executed causes said computer to:

generate a request and supply said request to a print driver, wherein said request causes said print driver to obtain said first value from a processor and to obtain said second value from said printer (col. 4, lines 13-16).

33. With respect to claim 32, Owa discloses the computer program product of claim 28 further comprising computer readable program code embodied in said medium that when executed causes said computer to:

supply said control signal to print driver, said control signal causing said printer driver to cause said printer to print said document (col. 3, lines 23-40).

34. With respect to claim 33, arguments analogous to those presented for claims 7 and 13, are applicable.

35. With respect to claim 34, arguments analogous to those presented for claim 19, are applicable.

36. With respect to claim 36, Owa teaches a method for estimating printer resources, said method comprising:

comparing a first value to a second value, said first value being an amount of a printer resource required to print a document and said second value being an amount of said printer resource available at said printer (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39);

causing said document to be printed if said second value is greater than said first value (col. 5, lines 1-9 & col. 7, lines 12-22); and

generating an indication signal if said first value is greater than said second value, said indication signal altering a user that said amount of said printer resource available at said printer is insufficient to print said document (warning signal in col. 5, lines 8-9).

37. With respect to claim 37, Owa teaches the method of claim 36 further comprising step of:

converting said first and second values to a common unit of measure before said step of comparing. *It is apparent that the first and second values are converted so that number of pages present in the printer is compared with the number of pages needed to print the print job.*

38. With respect to claim 38, Owa teaches the method of claim 36 further comprising the steps of:

requesting said first value from a first processor (paper size, print resolution, number of pages in col. 4, lines 17-43); and

requesting said second value from said printer (col. 4, lines 13-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 1 above, and further in view of Yamamoto U.S. Patent No. 6,584,291.

39. With respect to claims 11 and 12, Owa discloses the apparatus of claim 1, wherein said printer has a capability of measuring the remaining amount of toner and ink.

Owa, however, does not, disclose that the comparator compares remaining amount of toner or ink with the amount of ink needed to render the print job.

Yamamoto, the same field of endeavor of printing art, discloses a means for detecting the number of pixels required for the printing (col. 7, lines 41-67).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the pixel count detecting means of Yamamoto into the comparing means for comparing the remaining resource amount with the needed resource amount of Owa.

The suggestion/motivation for doing so would have been to check if the toner/ink remaining amount is sufficient enough to render the requested print job.

Therefore, it would have been obvious to combine Owa with Yamamoto to obtain the invention as specified in claims 11 and 12.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 18 above, and further in view of Okazawa U.S. Patent No. 6,459,469.

40. With respect to claim 20, Owa discloses the computer system of claim 18 but it does not disclose expressly that the second mode of operation causes said printer to *stop responding* to commands issued by a print server and to begin responding to commands issued by said print driver. However, since the printer only responses to the signal or request sent by the print driver, either of the host or the server, when the signal is directly sent from the print driver of the host, the printer will now responses to the commands sent from the print driver not from the server. Stopping of one mode is an obvious step since the printer cannot perform both modes simultaneously. And since the printer is not printing the job sent by the server, it can be concluded that the printer is not responding to the commands sent from the server.

Okazawa, the same field of endeavor of the network printer (printing apparatus 100-1 in fig. 1), discloses a printer that can receive print data from either print driver (host 130-1 in fig. 1) or print server (col. 11, lines 55-63) wherein when the printer is responding to commands issued by the print driver, it stops responding to commands issued by the print server (col. 11, lines 55-63). Since the printer is responding to the commands issued by the print driver, it is in a busy state and thus not responding to the commands issued by the print server which is in a waiting state.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the not responding state of Okazawa into the printer of Owa.

The suggestion/motivation for doing so would have been to prevent the printer from responding to both the server and the driver since it is impossible.

Therefore, it would have been obvious to combine Okazawa with Owa to obtain the invention as specified in claim 20.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 23 above, and further in view of Murayama U.S. Patent No. 6,433,893.

41. With respect to claim 26, Owa discloses the communication system of claim 23 but it does not disclose expressly that the network is a wireless network wherein said printer and said job assurance apparatus are connected wirelessly.

Murayama, the same field of endeavor of network printer, discloses a network printer wherein the printer communicates with the host in a wireless network environment (fig. 1).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the wireless network of Murayama into the network printer of Owa.

The suggestion/motivation for doing so would have been to use the network printer of Owa in a wireless network environment.

Therefore, it would have been obvious to combine Murayama with Owa to obtain the invention as specified in claim 26.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 33 above, and further in view of Okazawa.

42. With respect to claim 35, Owa discloses the computer program product of claim 33 but it does not disclose expressly that the computer program product causes said printer to switch from said second mode of operation to said first mode of operation after said document has been printed by said printer.

Okazawa, the same field of endeavor of the network printer, discloses a printer that can print the print job sent by the server after the print job sent by the print driver is done (setting of printing queue in col. 11, lines 55-63).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the setting print queue of Okazawa with the printer of Owa.

The suggestion/motivation for doing so would have been to automatically print the next print job when the first job is job.

Therefore, it would have been obvious to combine Okazawa with Owa to obtain the invention as specified in claim 35.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 36 above, and further in view of Okazawa.

43. With respect to claim 39, arguments analogous to those presented for claims 33 and 35, are applicable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2622

csp
October 18, 2004

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